

AMENDMENTS TO THE CLAIMS:

Without prejudice, this listing of claims will replace all prior versions and listings of the claims in the present application:

LISTING OF CLAIMS:

1-6. (Canceled).

7. (Currently Amended) An infrared source for a gas sensor comprising:
a first layer having first transmission characteristics produced by absorption of infrared radiation; and
a second layer having second transmission characteristics produced by absorption of infrared radiation,
wherein a combination of the first and the second transmission characteristics effects a bandpass filter characteristics for an operating frequency range, and wherein the first and second transmission characteristics are different transmission characteristics
~~wherein the first and second transmission characteristics are based on absorption of infrared radiation.~~

8. (Previously Presented) The infrared source according to claim 7, wherein the first transmission characteristics with respect to the operating frequency range provides a higher transmission for shorter wavelengths, and the second transmission characteristics with respect to the operating frequency range provides a higher transmission for longer wavelengths.

9. (Previously Presented) The infrared source according to claim 7, wherein the first layer includes glass, and the second layer includes one of silicon and germanium.

10. (Currently Amended) A gas sensor comprising:
an infrared source;
a detector; and
an interference filter situated between the infrared source and the detector,
wherein the infrared source includes:

a first layer having first transmission characteristics produced by absorption of infrared radiation, and

a second layer having second transmission characteristics produced by absorption of infrared radiation,

wherein a combination of the first and the second transmission characteristics effects a bandpass filter characteristics for an operating frequency range, and wherein the first and second transmission characteristics are different transmission characteristics

~~wherein the first and second transmission characteristics are based on absorption of infrared radiation.~~

11. (Previously Presented) The gas sensor according to claim 10, wherein the operating frequency range of the infrared source includes exactly one pass frequency of the interference filter.

12. (Previously Presented) The gas sensor according to claim 10, wherein the interference filter is a Fabry-Perot filter.

13. (New) The infrared source of claim 7, wherein the first layer and second layer are both positioned along a same line of transmission of infrared radiation from the infrared source.

14. (New) The infrared source of claim 13, wherein the infrared source is configured so that infrared radiation from the infrared source travels along the line of transmission through the first layer before traveling through the second layer.

15. (New) The infrared source of claim 7, wherein the first layer has a top surface directly contacting a bottom surface of the second layer.

16. (New) The gas sensor of claim 10, wherein the first layer and second layer are both positioned along a same line of transmission of infrared radiation from the infrared source.

17. (New) The gas sensor of claim 16, wherein the infrared source is configured so that infrared radiation from the infrared source travels along the line of transmission through the first layer before traveling through the second layer.

18. (New) The gas sensor of claim 10, wherein the first layer has a top surface directly contacting a bottom surface of the second layer.